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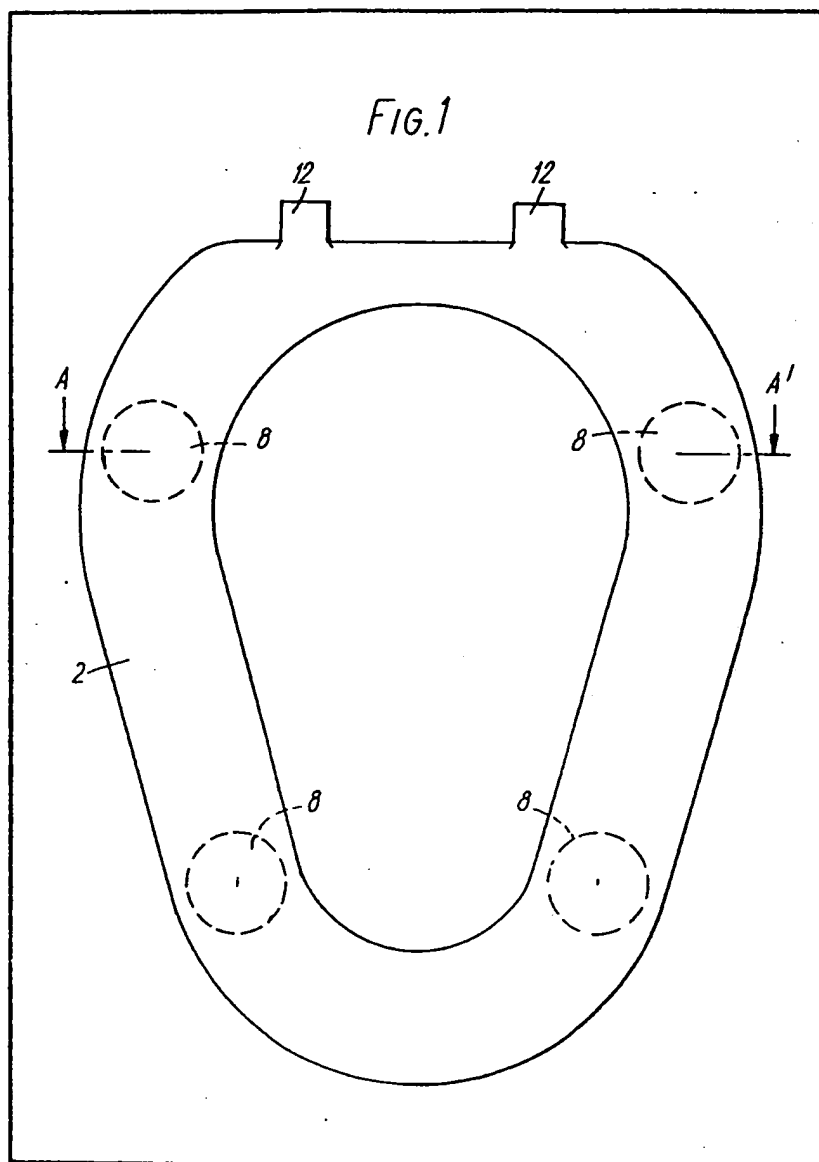
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(54) Disposable Toilet Seat Covers

(57) A stack of sterile disposable annular toilet seat covers of thin plastics film is carried by an annular seat-shaped support member 2 (e.g. of thicker, arcuate-reaction, plastics)

removably secured as by adhesive pads 8 on to a toilet seat, the lowermost cover being bonded to the support. The superposed covers are lightly bonded to each other and have staggered tabs (Figs. 3, 4 not shown) to facilitate peeling the uppermost cover off the stack after use.



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FIG. 1

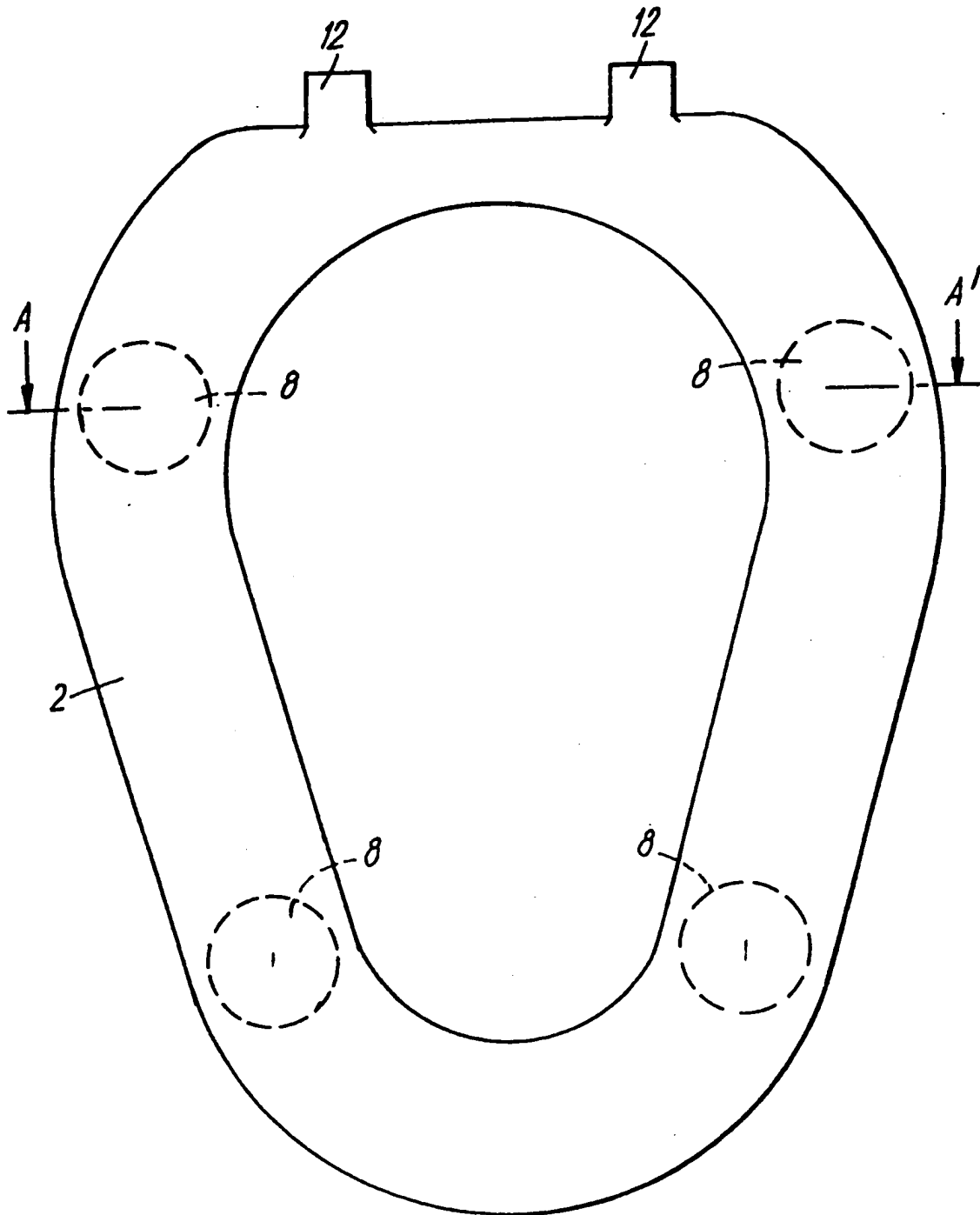


FIG. 2

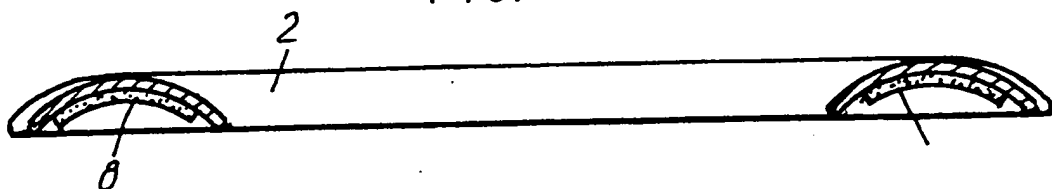


FIG. 3

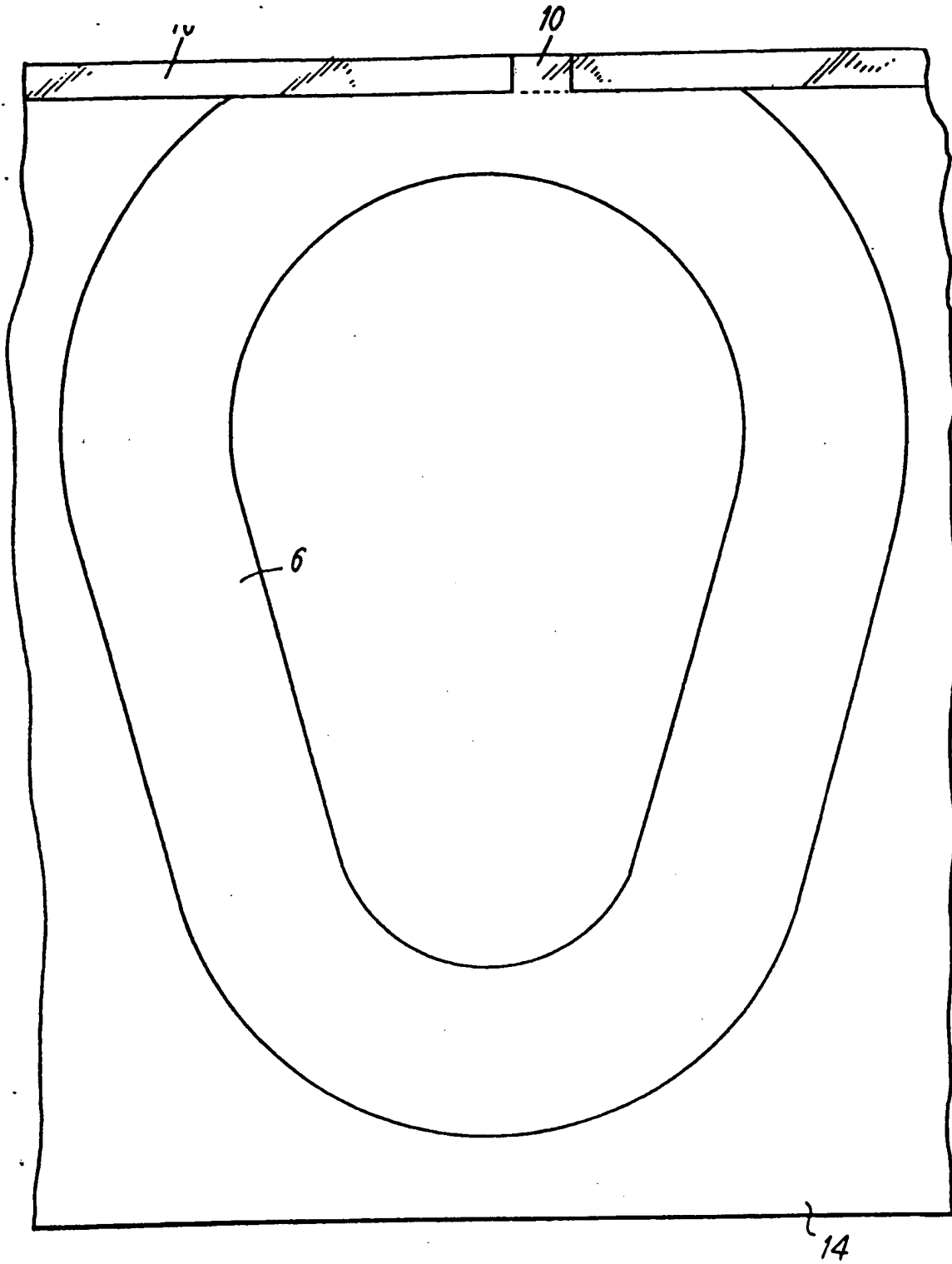
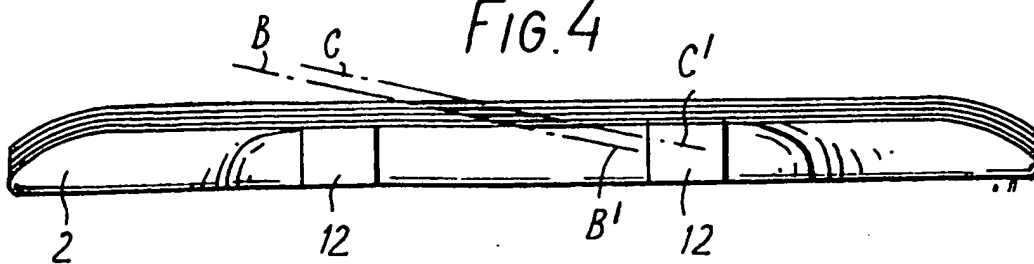


FIG. 4



## SPECIFICATION

### Toilet Seat Cover

This invention relates to a cover for a toilet seat.

5 In institutions such as hospitals and public lavatories, there is a danger of certain diseases being spread as a result of contamination of toilet seats. Soiling of toilet seats also occurs. This can be another source of disease and, in any event, is  
10 repellent to subsequent users of the toilet facilities.

This invention provides a toilet seat cover the use of which will reduce the spread of disease and the effects of soiling.

15 The toilet seat cover according to the present invention comprises a support member which in plan view is shaped like a toilet seat and is adapted to fit on to the top of said toilet seat; means for removably attaching the support  
20 member to the toilet seat; mounted on and bonded to said support member, a stack of sterile liners formed of thin plastics film, each liner conforming in outline substantially to the outline of the support member and being bonded to the  
25 liner below it, the bonding between liners being such that each liner is individually manually peelable from the stack when it is the topmost liner; and means for manually peeling each liner from the stack.

30 The lower surface of the support member preferably conforms in contour to the upper surface of the toilet seat so that it may sit firmly thereon. The upper surface of the former preferably is shaped to resemble the upper  
35 surface of a toilet seat. Thus, preferably, the support member resembles a shell adapted to conform to the top of the toilet seat.

The support member is preferably of moulded plastics material, e.g. pvc, polyethylene,  
40 polypropylene, polystyrene, ABS or acrylic polymer. In use, the support member is supported by the toilet seat and can therefore be formed of thin gauge material. For example, it may be made by vacuum forming a sheet of thermoplastics  
45 material over a suitably shaped former.

Any suitable means may be provided for removably attaching the support member to the toilet seat. Examples are self-adhesive pads which may be attached to the underside of the support  
50 member, or plastics clips or straps.

The liners are suitably formed of very thin plastics film such as that used for "shrink-wrapping". When formed into a stack, the liners will bond to each other in such a way as to form  
55 an integral stack but can readily be peeled manually and in turn from the top of the stack. The stack of liners, which may contain, for example, 50 or 100 liners or even more, is generally bonded to the support member by  
60 adhesion of the bottom liner of the stack to the support member. Such adhesion may be by application of heat and pressure or vacuum and may be such that when all the other liners have been peeled off the bottom liner can also be

65 manually peeled from the support member, although this is not essential. By use of a suitable temperature for the bonding step, the stack may be made sterile but alternative or additional means of sterilising the stack may be used, if  
70 desired.

The means for manually peeling each liner from the stack may suitably comprise a tab attached to each liner. The tabs are preferably so located on each liner that in the stack of liners the  
75 tabs are staggered with respect to each other in order to enable the tabs to be gripped individually e.g. between thumb and finger.

The invention is now illustrated with reference to one embodiment thereof and with the aid of the accompanying drawings in which:—

80 Figure 1 is a plan view of a suitable support member,

Figure 2 is a cross section through the support member along lines AA',

85 Figure 3 is a plan view of one sterile liner in relation to the plastics film from which it is formed, and

Figure 4 is a cross section through a cover employing the support member of Figures 1 and 2 and showing a stack of the liners of Figure 3 located on the support member.

Referring to the drawings, the cover comprises a moulded plastics support member 2 and, mounted on and bonded to the support member  
95 in a manner to be described below, a stack 4 of sterile liners 6 each formed of thin plastics film. To the underside of the support member are attached self adhesive pads 8 for attaching the cover to the toilet seat. Each liner is provided with  
100 a tab 10 for peeling the liner from the stack.

The support member 2 comprises a moulded thin plastics shell which is shaped to conform to the top surface of a proprietary toilet seat and includes extensions 12 adapted to cover the  
105 hinge portions of the toilet seat. Suitably, the shell is made by vacuum forming a thin sheet of thermoplastics material and the former employed for the vacuum forming step may suitably be a proprietary toilet seat or a mould conforming to the shape of the proprietary toilet seat.

The liners 6 suitably are stamped or otherwise cut from a roll of very thin plastics film 14. A suitable film is plastics film, e.g. polyolefin film or specifically polyethylene film, of the kind and gauge used for "shrink-wrapping". The stack of  
115 liners may be formed in any suitable manner. For example, the plastics film 14 of suitable thickness may be advanced from a roll thereof intermittently or continuously under a guillotine which stamps the appropriate shape from the film and each stamped shape is dropped onto a table or other  
120 suitable support surface and in register with the previously stamped shape whereby to form a stack of the stamped shapes. The thus-formed stack is then bonded to a support member by heat and application of pressure whereby the lowest member of the stack is caused to adhere to the top surface of the support member and the stack is consolidated.

The tab 10 associated with each liner 6 may comprise a non-adhesive extension of the liner which is integral with the liner. For example, it may be formed by providing a non-adhesive edging strip 16 to the sheet of plastics film from which the liners are stamped and so shaping the guillotine or other cutting tool that each liner is provided with an integral protruding part which has been cut from the said non adhesive edging strip. The tab 10 may then be cut from this protruding part either in the same operation as the stamping of the liner from the sheet or in a subsequent operation. To provide the tabs in staggered relationship in a stack of the liners, the tabs may be cut after the stack of liners have been formed and by cutting the non-adhesive protruding parts along a shearing line indicated by the broken lines BB' and CC' in Figure 3.

To attach the cover to the toilet seat, a plurality of disc-shaped adhesive pads 8 are attached to the underside of the support member. Whereas four pads are shown in the drawings, more or less than four may be used, if desired. The exposed faces of the pads may be self-adhesive and may be protected by peel-off sheets in well-known manner.

Any suitable method may be employed for sterilising the liners and the support member is preferably also sterile. The assembly of support member and stack of sterile liners bonded thereto is suitably sealed in a protective cover until required for use. For example the assembly may be heat sealed in a plastics bag.

In practice, the cover is fitted to a toilet seat and each user of the toilet after using the toilet grips the tab or tabs of the topmost liner and peels the liner away from the stack and disposes of it.

If desired, the liners may be provided with

portions adapted to extend over the hinge extension of the toilet seat.

#### Claims

1. A toilet seat cover assembly comprising a support member which in plan view is shaped like a toilet seat and which is adapted to fit on top of said toilet seat; means for removably securing said support member to the top of said toilet seat; mounted on and bonded to said support member, a stack of sterile liners each formed of thin plastics film, each liner conforming in outline substantially to the outline of the support member and being bonded to the liner below it, the bonding between adjacent liners being such that each liner is individually manually peelable from the stack when it is the topmost liner; and means for manually peeling each liner from the stack when it is the topmost liner.
2. A toilet seat cover assembly as claimed in claim 1 in which the support member is of moulded plastics.
3. A toilet seat cover assembly as claimed in claim 1 or claim 2 in which the means for removably securing the support member to the top of the toilet seat comprises self-adhesive pads attached to the underside of the support member.
4. A toilet seat cover assembly as claimed in any one of claims 1 to 3 in which the means for manually peeling each liner from the stack comprises a tab attached to each liner, the tabs being so located on each liner that in the stack they are staggered laterally with respect to each other to enable each tab to be gripped individually.
5. A toilet seat cover assembly substantially as hereinbefore described and as illustrated in the accompanying drawings.